

THE WEATHER OF 1943 IN THE UNITED STATES

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AMONG the outstanding features of 1943 was the persistent hot, dry weather in the southern part of the Western Plains and in the East Central States in summer. Crops, gardens, and livestock suffered severely in these areas, notably in Arkansas, Oklahoma, northwestern Texas, Kansas, and north-central Virginia. More than half of the days in July and August had 100° temperatures, or over at many stations in Arkansas, Oklahoma, and northern Texas, with the record July maximum of 120° equaled in Oklahoma.

Warm weather the last part of March and in April rapidly melted a deep snow cover on the frozen ground of the Northern Plains resulting in destructive floods in the Missouri Valley. Heavy rains in May resulted in floods affecting 7 States from Oklahoma to Michigan that caused extensive damage to agricultural and industrial areas. In parts of the Arkansas and Osage Rivers the floods were the greatest in 100 years, with near-record stages reached in the middle Mississippi, Illinois, Wabash, and Maumee Rivers.

An outstanding storm of the year was a tropical hurricane in southeastern Texas on July 27 which killed 18 persons and destroyed property valued at \$15,000,000. Millions of dollars damage was produced by winds on the Pacific Coast, mostly in California, on December 8-10.

Tornadoes killed 50 people and did approximately \$12,000,000 damage (see article in this REVIEW). Hail caused about \$4,575,000 damage in Illinois on July 28 at Peoria and vicinity and in Warren County, while losses exceeded in the same month \$2,000,000 in Iowa, and at least \$2,595,000 in Minnesota. Complete hail damage reports will appear in the United States Meteorological Yearbook for 1943.

Glaze and sleet on January 27-29 caused over \$1,000,000 damage in Virginia and the District of Columbia area. Another extensive glaze storm occurred in a south-central belt extending from Oklahoma to the middle Atlantic States on December 24-26.

An interesting example of temperature inversion occurred over the western portion of Wyoming on December 29 during the presence of a large stationary high-pressure area, when Lander had a temperature of 1° (its lowest for the month), while on the same date Dubois, 80 miles to the northwest and 1,600 feet higher, had 60° (its highest for the month). A much more phenomenal temperature contrast condition occurred in the Black Hills of South Dakota on January 20-23. This was described in an article by R. R. Hamann, of Rapid City, S. Dak., in the MONTHLY WEATHER REVIEW of March 1943.

EFFECT ON CROPS

In general, the weather for the year 1943 was somewhat less favorable for agriculture than in 1942, principally because of untimely spring frosts, unfavorable wetness during the spring planting season and, later, harmful dryness in certain areas. Dry weather curtailed crop production in some sections, but in most of the principal agricultural States favorable conditions prevailed and the general farm output, while considerably less than for the preceding year, was larger than normal.

There were also several periods of unfavorably cold weather in the spring which heavily damaged fruit and

early vegetables over a wide south-central and southern belt, extending from the Atlantic Coast to the Great Plains, and unusually small crops of apples, peaches, cherries, apricots, and strawberries survived for harvest.

East of the Mississippi River, in addition to the untimely frost, the spring months brought frequent heavy rains to many sections which saturated and flooded lowlands and seriously hampered farmers in planting corn, haying, and other seasonal work. The corn crop got off to a late start, but with the advent of summer, favorable temperatures and much sunshine hastened development and relieved the apprehension of probable failure to mature before the fall frosts. Summer warmth hastened maturity and there was no material frost damage, while the fall season was unusually favorable for harvest; production for the country as a whole was the second largest of record.

The summer was warmer than normal in nearly all sections of the country and most of the principal agricultural States had sufficient moisture to produce good crops, but unfavorable dryness developed in central-eastern sections and much of the South.

The outstanding feature of the fall months was widespread dryness, in marked contrast to the two preceding falls. It was one of the driest falls of record over large areas. While this facilitated the harvesting of crops, the dryness was unfavorable for the seeding and germination of winter grains, especially in the western Winter Wheat Belt and the South.

About the middle of December a severe freeze over-spread the South, resulting in more or less damage, heavy in localities, from Texas eastward to Florida and the Carolinas. Florida suffered most with a loss of truck crops, many ready for market, valued at more than 4 million dollars.

TEMPERATURE

The mean temperature for the year 1943, derived by weighting the averages for the varying areas of the several States, was 53.4°, or only 0.2° above the average for the 1886 to 1943 period, during which time the highest mean annual temperature was 55.6° in 1921 and the lowest 51.8° in 1917.

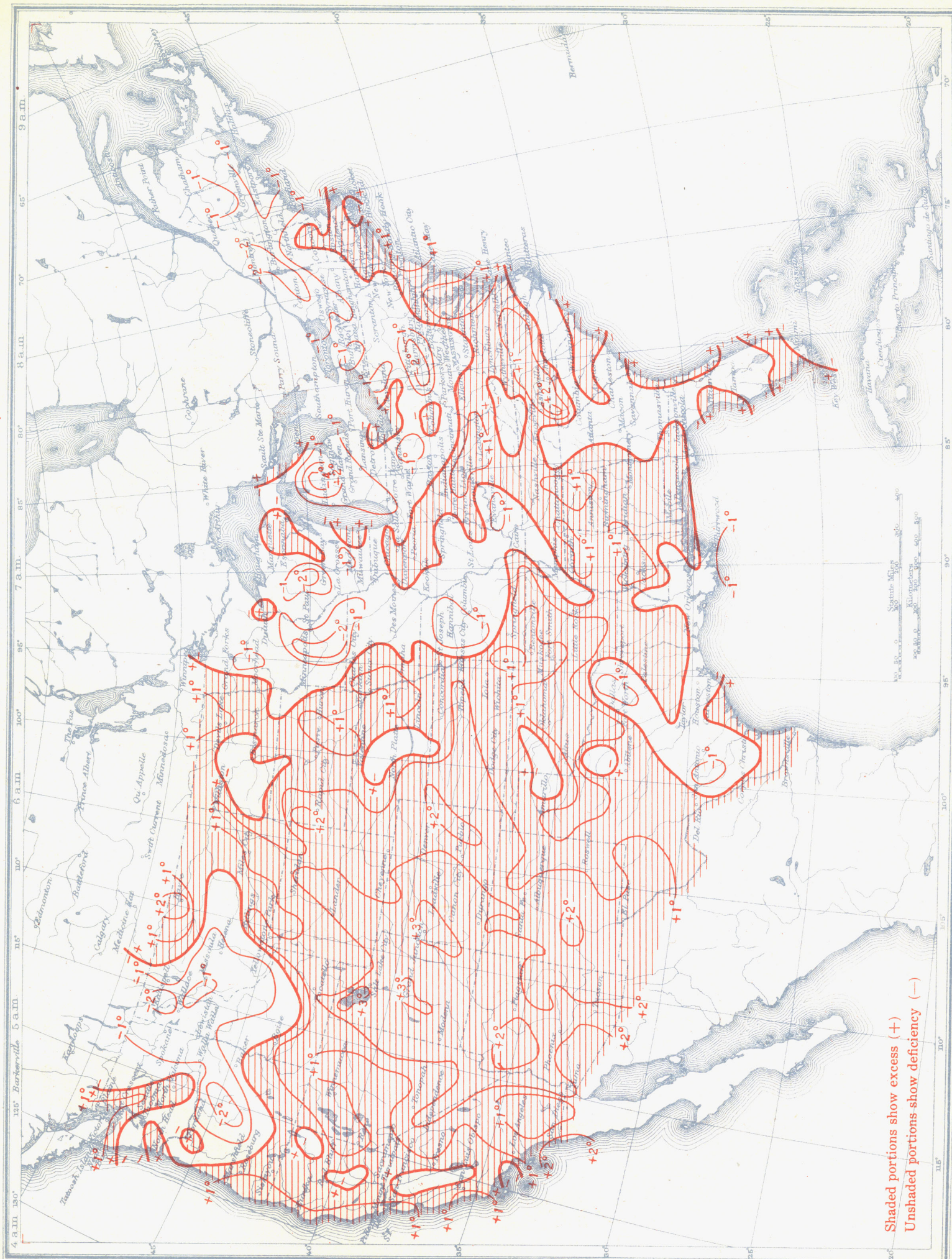
Monthly and annual State temperature departures are presented by table 1, supplemented by a chart showing the annual distribution areally.

Yearly temperatures averaged generally 1° to 3° below normal in the more northern Rocky Mountains, some upper Mississippi Valley areas, the lower Peninsula of Michigan, and from northern Pennsylvania to Maine, while they were generally from 1° to over 3° above the average from eastern Montana and southern South Dakota southwestward over an extensive southwestern area, including the Great Basin and far Southwest. The highest State yearly average was 70.6° for Florida and the lowest was 39.8° for North Dakota. The greatest monthly State average was 87.1° for Oklahoma during August and the lowest was the January average of -1.4° for North Dakota.

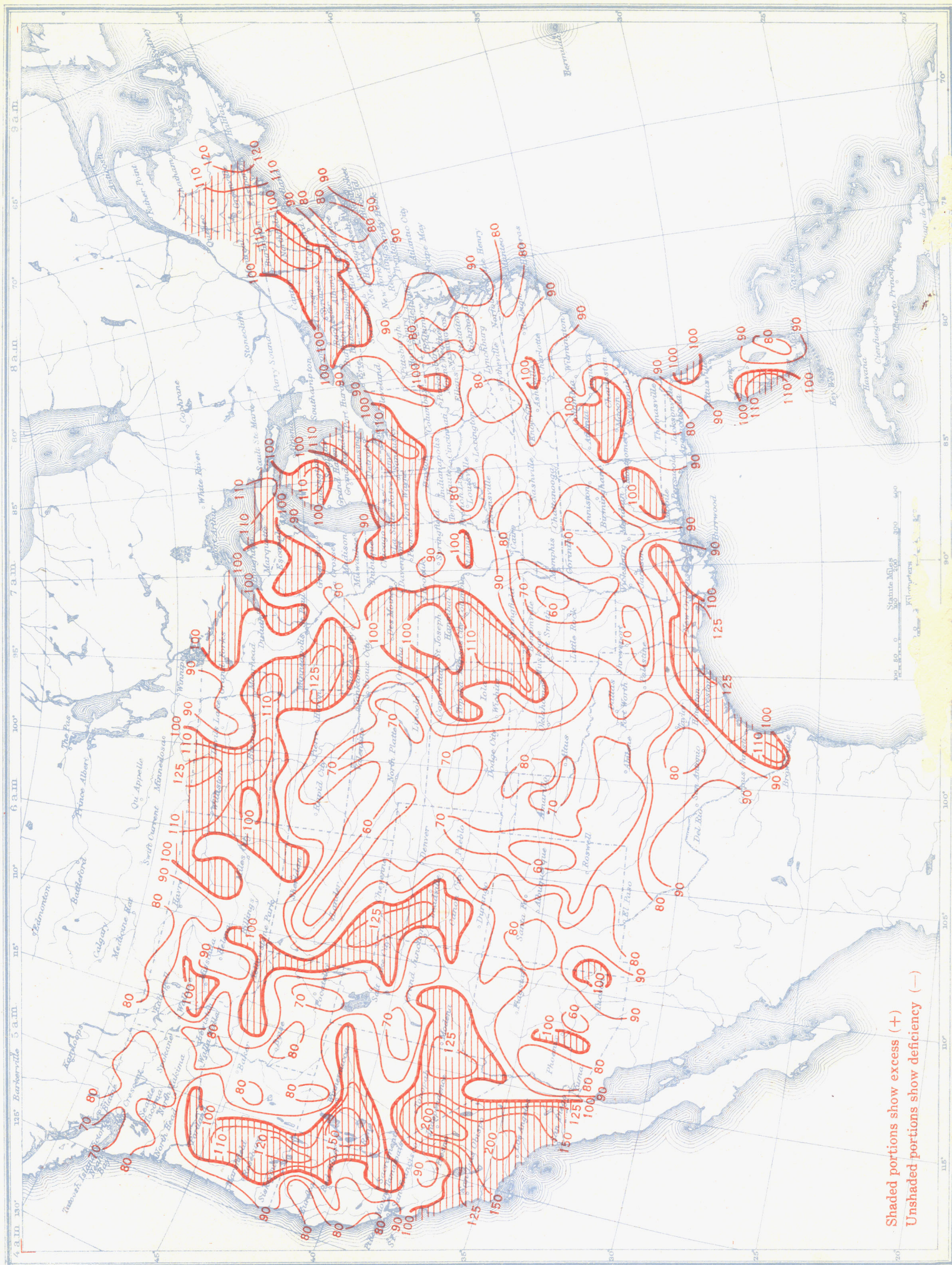
The highest temperature reported during the year was 124° in July at 2 stations in California. The lowest was -60° at Island Park Dam, Idaho, on January 18.

January temperatures averaged below normal in the

Annual Temperature Departures (°F.) in the United States, 1943.



Shaded portions show excess (+)
Unshaded portions show deficiency (—)



northern third of the country, where deficiencies of 5° to 9° occurred in large northwestern areas, and above in the southern two-thirds. A severe cold wave overspread the northern interior between the 16th and 19th, breaking the lowest January temperature records at many stations in Wyoming and Kansas. Zero reading extended to the Ohio Valley.

Cold weather again spread southeastward over the country about the middle of February with readings of 25° to -35° or lower, in New England, New York, and the North Central States and 10° or more below freezing in northern Florida. However, practically all of the country, except Florida, showed averages above normal for that month, especially the northwestern Plains.

March also was characterized by pronounced short-period successions of unseasonably cold and abnormally warm weather. The most severe cold of the season prevailed over practically the entire region from the Rocky Mountains eastward from about the 1st to the 9th. It broke practically all of the lowest March temperature records in Georgia, and on the 3d equaled the lowest March reading of 9° in Mississippi. Subzero temperatures were recorded in Arkansas for the first time in March, while -22° in Missouri was 10° lower than any previous March reading on record, and -45° in Michigan set a new low for this month in that State.

Temperature averages for April were generally below normal east of the Mississippi River and above to the westward, with deficiencies of 7° centered in western New York, and excesses of 8° in middle Rocky Mountain areas. Freezing extended almost to the Gulf on the 14-16. It was the coldest April on record in New York. May was consistently cool in the Northwest and North Central States and seasonal to considerably above normal in the South and South.

June was decidedly warmer than normal in central and northern portions and cooler than usual rather generally west of the Rocky Mountains. It was the warmest June on record in South Carolina, Virginia, West Virginia, New Jersey, Maryland, and Delaware.

Temperatures for July averaged normal to about 5° above for practically the entire country. They continued generally above normal through August, especially in the drought areas of Arkansas, Oklahoma, Texas, Kansas, Virginia, and adjoining sections.

September was cool east of the Rockies, with deficiencies of 4° to 6° in the middle Mississippi Valley, but warm weather continued in the far West, ranging up to over 8° above normal in Oregon.

In October warmer than usual weather prevailed from the Pacific coast to Lake Michigan, especially in North Dakota, while temperatures averaged generally below normal from Texas and the Gulf to eastern Canada, with the largest deficiencies, 4°, centered in Alabama. "Indian Summer" was reported from the Northwest. Near the middle of the month freezing extended nearly to the Gulf and some low temperature records for the month were broken in northern Florida.

November temperatures were somewhat above normal in the far West and slightly below between the Gulf and Great Lakes. December was warmer than usual from the Pacific to the western Lakes and colder than normal from New Mexico and Texas to New England. A cold wave spread southeastward at the middle of the month, bringing below-zero readings to the interior as far south as Tennessee on the 16-17 and severe freezes into Florida from the 16th to 19th.

PRECIPITATION

The average annual precipitation for the country as a whole, based on weighted averages, was 26.27 inches, or 2.78 inches less than the average for the 1886 to 1943 period, during which time the wettest year was 32.74 inches in 1915 and the driest 24.65 inches in 1910.

Figure 1 gives the percentages of normal precipitation by States for 1943; figure 2, the percentages for the growing season; table 2, the percentages for the months and the year; and table 3, the monthly and annual amounts. The areal distribution of annual precipitation is shown in percentages by chart.

Precipitation for the year was much below normal in a large area extending southward from the southern New England coast to the Carolinas and southwestward to southwestern Texas and New Mexico, and in the region from South Dakota to Texas. More than the usual amount fell along the West Gulf coast, in the middle portion of the far West, in central and western Missouri, and at slightly more than half of the stations from eastern Montana to Maine. Arkansas, Mississippi, Nebraska, and Washington received approximately three-fourths of their normal amount, while 10 percent more than normal fell in the Great Basin.

On an annual basis, the wettest State was Louisiana with 51.73 inches. This was the only State to have an average total of 50 inches compared to 6 States in 1942. The driest State, as is usually the case, was Nevada with 9.69 inches. On a country-wide basis, the winter, including December of 1942, had 93 percent of normal precipitation; spring 108 percent; summer 94 percent, and fall

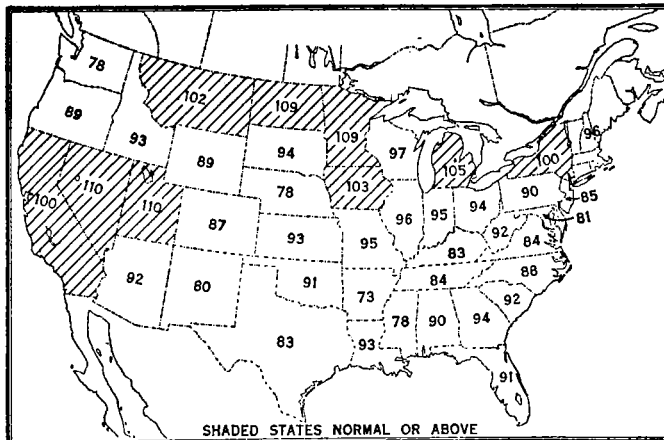


FIGURE 1.—Percentage of normal precipitation, 1943.

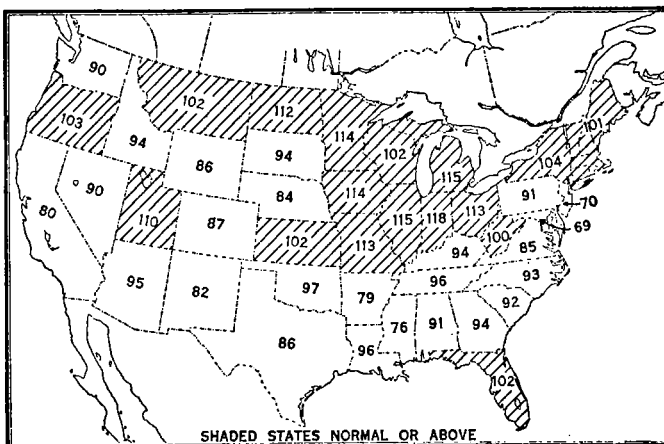


FIGURE 2.—Percentage of normal precipitation, April 1-September 30, 1943.

80 percent. May was the wettest month, averaging 3.46 inches, and February the driest, averaging 1.21 inches. This was the driest February of record for the United States.

During the April to September growing season, more than the usual amount of precipitation was received in Florida, Kansas, Utah, and Oregon, and in the area extending from Montana to Maine and thence southward to the Ohio Valley and Missouri; elsewhere, amounts were generally below normal, with only 69 percent of normal in Maryland and Delaware, 70 percent in New Jersey, 76 percent in Mississippi, and 79 percent in Arkansas.

The outstanding features of January's precipitation were extremely heavy amounts in most sections west of the Rockies, and extreme dryness in central interior portions of the country. It was the driest January of record in Missouri, Arkansas, and Oklahoma, with a State average of only 0.08 inch in Oklahoma, and the wettest since 1916 in Nevada and California.

February was outstanding for widespread deficiencies in precipitation, except in the Pacific States. The relatively driest States were Florida and New Mexico with 26 percent of normal, Texas 28 percent, and Arkansas 29 percent.

Most of the Plains States continued dry during March, with normal to above mostly elsewhere, especially in the Pacific States and from Ohio and Indiana southward. In April precipitation was generally subnormal in a large area from southern California and the Mexican border to South Dakota.

May was characterized by unprecedentedly heavy rainfall in most interior valley areas. It was extremely heavy in Missouri, where 25.54 inches at Joplin broke all monthly records. In June precipitation was much above

normal in a triangular area from Montana eastward to the upper Lakes and southward to Missouri.

Large excesses fell during July in most sections from Lake Erie southward over the South Atlantic and immediate middle Gulf States; however, large deficiencies developed in Arkansas and Oklahoma, with a dry area in the Central East centered in the lower Potomac Valley. Extreme dryness intensified during August in the middle Atlantic area and western Cotton Belt, with many stations reporting less than 25 percent of normal rainfall.

September precipitation was above normal from Tennessee and Alabama to southern Texas and in Florida, and generally deficient elsewhere, especially west of the Great Plains. Unusual contrasts prevailed in October, with large deficiencies mostly in the southern latitudes except southern Florida and Arkansas and large excesses in the Northeast and far Northwest.

Amounts were somewhat above normal during November from Minnesota to the north Atlantic Coast and in Alabama and Mississippi, and below elsewhere, decidedly so from Ohio, Kentucky, and Arkansas westward over practically the entire western part of the country. On November 6-8 the most severe snowstorm in Minnesota, for so early in the season, did \$1,100,000 damage, mostly by smothering 150,000 turkeys in that State. This snowstorm and blizzard blocked roads and suspended farm work from northeastern Nebraska to Wisconsin.

December precipitation was considerably above normal from southern California eastward over the southern Plains and Missouri, while it was much less than half the usual amounts in the northern half of the country, with only 9 percent of normal in Minnesota. It was the driest December for more than a century in the Minneapolis-St. Paul area and for over 54 years at Seattle.

TABLE 1.—Monthly and annual temperature departures from normal for the year 1943

State	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Alabama.....	+2.9	+2.0	-1.4	+0.7	+2.9	+3.5	+1.6	+2.4	-3.0	-2.9	-2.0	-0.4	+0.6
Arizona.....	+1.7	+3.0	+1.5	+3.3	+1.4	-1.3	+0.2	-0.6	+1.1	+0.2	+0.4	-0.2	+0.9
Arkansas.....	+0.6	+3.9	-5.6	+1.4	+1.8	+2.7	+2.3	+4.5	-3.9	-1.5	-0.6	-2.1	+0.3
California.....	+1.1	+1.5	+0.9	+0.9	+1.4	-3.8	-0.8	-1.7	+3.7	+0.2	+1.2	+0.9	+0.5
Colorado.....	+2.2	+4.8	-1.8	+6.1	-1.4	-0.6	+1.5	+2.3	+0.3	+0.5	+0.8	+0.9	+1.3
Florida.....	+2.0	-2.0	-0.1	-0.6	+1.7	+1.3	+0.4	+0.6	-0.4	-2.6	-1.7	-0.5	-0.2
Georgia.....	+2.4	+1.2	-2.1	-0.6	+1.2	+2.6	+0.4	+0.5	-2.9	-2.5	-1.7	-0.4	-0.1
Idaho.....	-1.2	+1.3	-3.8	+3.7	-2.8	-3.8	-0.6	-1.0	+3.4	+1.8	+1.1	+1.3	0.0
Illinois.....	+0.6	+4.1	-3.8	-1.0	-1.2	+2.9	+1.0	+2.4	-4.2	-0.7	-3.0	-1.5	-0.4
Indiana.....	+0.6	+3.1	-3.0	-2.2	+0.1	+4.0	+0.6	+1.8	-4.0	-0.8	-2.6	-2.3	-0.4
Iowa.....	-1.9	+5.1	-3.6	+0.2	-2.7	+2.0	+0.7	+1.8	-3.6	-0.1	-2.5	+1.9	-0.2
Kansas.....	+0.7	+7.3	-3.9	+3.4	-3.0	+1.6	+1.4	+4.9	-2.2	-1.5	-0.7	-2.4	+0.5
Kentucky.....	+2.2	+3.1	-3.6	-2.0	+1.9	+3.6	+0.7	+2.2	-4.0	-1.7	-1.9	-2.6	-0.2
Louisiana.....	+0.1	+1.8	-2.9	+1.1	+3.2	+2.0	+1.0	+2.0	-2.8	-3.2	-3.7	-1.0	-0.2
Maryland and Delaware.....	+0.8	+3.0	+0.2	-3.4	+1.5	+5.6	+0.3	+2.1	-1.8	-1.7	-1.0	-0.9	+0.4
Michigan.....	-3.8	+2.6	-3.9	-4.0	-1.8	+2.3	+0.3	+1.0	-3.8	-1.1	-2.2	-1.4	-1.3
Minnesota.....	-6.3	+2.1	-6.6	-0.2	-2.6	+0.8	+1.9	+0.9	-3.7	+1.1	-2.0	+4.0	-0.9
Mississippi.....	+1.1	+2.2	-3.0	+0.8	+3.6	+3.4	+2.2	+3.2	-2.8	-2.4	-2.8	-0.9	+0.4
Missouri.....	+0.3	+5.9	-4.2	+0.7	-0.6	+2.2	+1.5	+3.2	-3.5	-1.4	-1.7	-3.0	0.0
Montana.....	-8.3	+4.0	-7.2	+4.4	-3.3	-3.9	-0.5	+0.3	+1.3	+3.0	+2.3	+2.4	-0.5
Nebraska.....	-0.2	+8.8	-4.1	+3.8	-3.1	-0.1	+1.7	+4.1	-1.5	+0.3	+0.1	+2.1	+1.0
Nevada.....	+3.5	+4.8	+2.9	+5.8	+1.7	-3.4	+0.7	-0.7	+4.6	+2.3	+0.9	+2.2	+2.1
New England.....	-3.5	+1.2	-2.0	-5.0	-0.2	+2.9	+0.7	-0.4	-1.5	+0.4	-0.8	-4.8	-1.1
New Jersey.....	-0.6	+2.3	+0.3	-4.1	+1.3	+5.2	+0.4	+1.2	-0.8	-1.1	-1.3	-2.7	0.0
New Mexico.....	+2.2	+4.0	+0.3	+4.6	+1.2	+0.3	+0.4	+2.8	+0.2	-0.7	-1.2	-2.4	+1.0
New York.....	-3.6	+2.1	-0.8	-5.7	0.0	+4.7	+0.9	+0.5	-1.5	-1.0	-1.9	-3.5	-0.8
North Carolina.....	+1.6	+1.5	-1.7	-1.3	+2.2	+4.2	-0.4	+1.4	-3.1	-1.6	-1.3	-0.5	+0.1
North Dakota.....	-7.8	+5.4	-6.8	+3.3	-3.6	-2.5	+1.5	+1.2	-1.2	+4.2	+1.9	+8.1	+0.3
Ohio.....	+1.0	+2.7	-1.5	-3.9	+0.6	+5.0	+0.5	+0.7	-3.1	-1.4	-2.1	-2.3	-0.3
Oklahoma.....	+0.4	+5.9	-5.0	+3.9	-1.6	+2.3	+2.2	+5.5	-1.2	-1.8	-0.4	-3.8	+0.5
Oregon.....	-2.7	+1.8	-0.9	+2.3	-2.5	-3.7	-1.2	-2.5	+4.5	+0.1	+0.5	-0.1	-0.4
Pennsylvania.....	0.0	+1.5	-0.4	-5.5	+0.7	+4.8	+0.4	+0.5	-2.8	-2.5	-2.6	-3.0	-0.7
South Carolina.....	+1.8	+1.4	-2.2	-1.1	+1.1	+3.6	-0.4	+1.3	-3.3	-1.9	-1.9	-0.5	-0.2
South Dakota.....	-6.9	+7.6	-5.7	+4.1	-2.7	-0.9	+1.4	+2.7	-1.5	+2.6	+0.1	+4.4	+0.4
Tennessee.....	+1.8	+2.1	-3.6	-0.9	+2.7	+4.2	+1.8	+3.1	-3.6	-2.5	-1.8	-1.8	+0.1
Texas.....	-0.7	+3.5	-3.7	+3.2	+0.7	+0.7	+0.5	+3.0	-1.9	-2.2	-2.2	-2.4	-0.1
Utah.....	+3.3	+2.2	-0.1	+6.0	-0.7	-2.8	+1.0	+1.0	+3.2	+2.5	+0.7	+2.5	+1.6
Virginia.....	+2.2	+2.3	-1.1	-2.4	+2.4	+4.9	+0.2	+1.7	-2.7	-1.4	-0.6	-1.0	+0.4
Washington.....	-5.6	+2.4	-2.9	+1.9	-2.8	-2.6	-0.1	-1.6	+3.3	+0.8	+1.1	-0.3	-0.5
West Virginia.....	+3.0	+1.3	-2.3	-3.9	+1.7	+5.2	+0.2	+0.5	-3.8	-2.3	-2.1	-2.6	-0.4
Wisconsin.....	-3.1	+1.6	-5.8	-2.0	-1.2	+2.6	+1.7	+1.8	-4.4	0.0	-3.3	+2.0	-0.8
Wyoming.....	+0.3	+5.7	-4.7	+7.5	-2.2	-1.6	+1.5	+3.1	+1.5	+2.9	+2.4	+2.4	+1.6

TABLE 2.—Percentage of normal precipitation, 1943

State	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Alabama.....	82	43	169	84	96	81	85	77	135	32	108	72	90
Arizona.....	138	40	128	60	31	97	47	135	133	98	4	117	92
Arkansas.....	23	29	121	66	163	70	30	29	96	116	28	83	73
California.....	170	61	132	120	35	119	57	33	17	93	41	81	100
Colorado.....	132	67	102	52	130	107	64	129	28	79	62	87	87
Florida.....	64	26	136	76	124	94	110	102	96	61	85	59	91
Georgia.....	132	37	161	106	122	97	90	76	87	24	82	92	94
Idaho.....	121	85	108	110	89	156	81	78	18	154	47	55	93
Illinois.....	51	53	87	108	218	98	93	89	67	83	65	59	96
Indiana.....	37	60	126	90	218	93	127	74	94	59	66	42	95
Iowa.....	73	72	83	93	109	143	139	142	58	76	62	46	103
Kansas.....	26	59	59	77	121	141	91	72	87	89	17	179	93
Kentucky.....	34	51	162	97	138	98	103	35	89	64	39	58	83
Louisiana.....	63	57	166	54	80	82	78	56	266	46	98	100	93
Maryland and Delaware.....	87	63	96	88	125	72	55	30	55	172	112	45	81
Michigan.....	99	100	137	97	153	155	104	100	72	73	115	40	105
Minnesota.....	119	103	118	51	140	142	124	125	65	93	115	9	109
Mississippi.....	41	51	151	64	85	61	65	46	183	36	108	74	78
Missouri.....	16	45	82	75	211	138	70	65	88	115	35	98	95
Montana.....	180	80	99	140	75	156	70	117	28	131	57	49	102
Nebraska.....	42	52	70	90	64	124	102	61	43	85	38	25	78
Nevada.....	188	79	129	143	37	195	79	32	51	155	78	87	110
New England.....	70	69	84	99	152	101	115	95	49	151	147	29	96
New Jersey.....	81	57	79	77	133	84	89	46	48	210	91	40	85
New Mexico.....	69	26	72	27	85	146	80	88	57	42	70	203	80
New York.....	72	81	95	123	161	100	102	101	41	163	110	38	100
North Carolina.....	125	49	121	91	90	111	133	52	71	29	60	89	88
North Dakota.....	149	102	164	104	100	147	109	133	35	74	76	24	109
Ohio.....	58	66	127	97	176	87	158	84	62	71	45	38	94
Oklahoma.....	6	46	94	70	226	74	34	26	90	99	19	193	91
Oregon.....	112	65	106	127	81	156	70	218	9	181	50	42	89
Pennsylvania.....	83	58	78	115	168	81	104	65	21	177	99	36	90
South Carolina.....	138	37	159	115	80	89	124	68	78	11	79	112	82
South Dakota.....	118	81	68	45	84	160	82	99	46	154	89	20	84
Tennessee.....	40	61	128	85	98	75	98	64	176	56	62	71	84
Texas.....	60	28	100	45	116	76	124	25	117	52	93	125	83
Utah.....	124	98	104	71	80	368	82	143	38	187	60	88	110
Virginia.....	84	59	109	87	111	100	104	38	72	82	81	69	84
Washington.....	57	85	117	120	92	102	71	130	24	137	37	57	78
West Virginia.....	93	58	119	109	112	83	143	96	41	80	77	61	92
Wisconsin.....	114	44	120	67	127	145	77	131	52	86	113	20	97
Wyoming.....	135	69	103	88	104	124	53	82	38	110	68	71	89

TABLE 3.—Monthly and annual precipitation (inches), 1943

State	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Alabama.....	4.07	2.30	9.87	3.72	3.74	3.50	4.72	3.64	4.40	0.86	3.44	3.50	47.76
Arizona.....	1.73	0.54	1.32	0.34	0.10	0.32	0.98	3.08	1.70	0.80	0.04	1.50	12.45
Arkansas.....	1.00	1.00	5.66	3.20	7.89	2.86	1.13	1.03	3.23	3.48	1.10	3.43	35.01
California.....	8.24	2.66	4.82	2.04	0.35	0.37	0.04	0.03	0.08	1.13	0.05	3.30	24.01
Colorado.....	1.04	0.66	1.31	0.92	2.40	1.49	1.41	2.51	0.39	0.89	0.48	0.77	14.26
Florida.....	1.76	0.81	4.29	2.18	4.97	6.32	8.12	7.11	6.44	2.54	1.88	1.62	48.04
Georgia.....	5.66	1.79	7.90	3.88	4.25	4.33	5.30	3.96	3.23	0.65	2.17	3.80	46.92
Idaho.....	2.68	1.48	1.94	1.58	1.43	2.09	0.52	0.47	0.18	2.24	0.92	1.15	16.68
Illinois.....	1.21	1.04	2.75	3.70	8.79	3.84	3.00	2.97	2.41	2.08	1.74	1.27	34.80
Indiana.....	1.17	1.47	4.67	3.20	8.71	3.58	4.22	2.51	3.13	1.60	2.02	1.16	37.44
Iowa.....	0.79	0.77	1.51	2.57	4.40	6.16	4.89	5.07	2.18	1.66	1.01	0.52	31.53
Kansas.....	0.18	0.59	0.85	1.96	4.61	5.54	2.85	2.26	2.39	1.67	0.22	1.50	24.62
Kentucky.....	1.54	1.81	7.62	3.91	5.43	4.04	4.21	1.32	2.58	1.67	1.33	2.20	37.66
Louisiana.....	3.06	2.55	7.68	2.51	3.58	4.04	4.73	2.92	10.15	1.50	3.79	5.22	51.73
Maryland and Delaware.....	2.94	2.01	3.56	3.14	4.67	2.79	2.45	1.34	1.88	5.18	2.97	1.41	34.34
Michigan.....	2.00	1.76	2.82	2.30	4.87	4.79	2.82	2.77	2.27	1.94	2.88	0.82	32.04
Minnesota.....	0.95	0.78	1.37	1.10	4.42	5.67	4.07	3.99	1.80	1.70	1.31	0.07	27.23
Mississippi.....	2.09	2.49	8.57	3.13	3.64	2.64	2.78	1.92	5.57	0.92	3.90	3.91	41.55
Missouri.....	0.39	0.94	2.63	2.91	9.91	6.39	2.49	2.46	3.51	3.23	0.93	2.10	37.89
Montana.....	1.57	0.57	0.93	1.60	1.56	4.00	0.99	1.24	0.37	1.34	0.52	0.42	15.11
Nebraska.....	0.22	0.37	0.77	2.14	2.12	4.36	3.01	1.70	0.87	1.17	0.29	0.16	17.18
Nevada.....	2.28	0.83	1.25	1.10	0.31	0.96	0.30	0.15	0.22	0.93	0.50	0.86	9.69
New England.....	2.47	1.90	3.09	3.34	5.07	3.49	4.31	3.63	1.55	5.27	5.13	0.99	40.54
New Jersey.....	2.97	2.01	3.01	2.82	4.92	3.24	4.21	2.16	1.85	7.55	2.89	1.41	39.04
New Mexico.....	0.41	0.19	0.54	0.23	0.98	1.82	1.96	2.11	0.98	0.47	0.46	1.42	11.57
New York.....	2.17	2.23	2.91	3.70	5.50	3.68	3.96	3.81	1.45	5.34	3.41	1.11	39.27
North Carolina.....	4.72	1.97	5.05	3.27	3.67	5.24	7.89	2.94	2.79	0.94	1.61	3.36	43.45
North Dakota.....	0.73	0.50	1.23	1.48	2.21	5.07	2.72	2.61	0.51	0.76	0.44	0.12	18.38
Ohio.....	1.80	1.68	4.44	3.12	6.39	3.37	6.01	2.88	1.83	1.76	1.23	1.03	35.54
Oklahoma.....	0.08	0.63	1.99	2.33	10.28	2.76	0.96	0.77	2.75	2.82	0.39	3.10	28.86
Oregon.....	4.55	2.05	3.03	2.58	1.40	2.00	0.30	0.87	0.11	3.60	1.80	1.68	23.97
Pennsylvania.....	2.68	1.71	2.73	3.98	6.08	3.34	4.47	2.72	0.72	5.62	2.87	1.12	38.04
South Carolina.....	4.94	1.58	6.09	8.70	2.88	4.27	7.22	3.90	3.14	0.33	1.84	3.94	43.83
South Dakota.....	0.65	0.46	0.74	0.94	2.35	5.29	2.04	2.18	0.68	1.72	0.55	0.11	17.71
Tennessee.....	1.95	2.65	6.94	3.77	4.09	3.15	4.37	2.59	5.31	1.56	2.22	3.21	41.81
Texas.....	1.31	0.51	2.04	1.32	4.25	2.37	3.23	0.61	3.48	1.33	2.11	2.83	25.39
Utah.....	1.50	1.24	1.44	0.82	0.91	2.10	0.71	1.40	0.38	2.00	0.54	0.96	14.02
Virginia.....	2.76	1.85	4.03	2.95	4.34	4.20	4.85	1.73	2.32	2.50	2.04	2.17	35.74
Washington.....	2.81	3.12	3.96	2.89	1.81	1.78	0.53	1.03	0.43	4.09	1.85	3.22	27.52
West Virginia.....	3.43	1.89	4.59	3.84	4.59	3.64	6.56	3.95	1.25	2.26	2.12	1.96	40.08
Wisconsin.....	1.62	0.57	2.17	1.67	4.50	5.75	2.63	4.31	1.86	2.10	2.06	0.27	29.51
Wyoming.....	1.09	0.54	1.16	1.36	2.10	1.95	0.71	0.89	0.42	1.19	0.46	0.52	12.39